

Cryo-fixation workshop : plunge freezing technique.

Cryo-fixation is a key method for preserving the native structural state of biological samples while avoiding artifacts associated with conventional chemical fixation. Depending on sample thickness, different cryo-fixation approaches can be applied, enabling subsequent observation using various photonic and/or electron microscopy techniques. This workshop will focus on the cryo-fixation of thin samples (< 5 μm in thickness) using the **plunge freezing** technique.

Participants will become familiar with the operation of the Leica EM GP2 system through the following steps:

- Theoretical introduction to the plunge freezing principle
- Preparation of liquid ethane required for rapid vitrification
- System setup and parameter adjustment
- Practical cryo-fixation of *Quantifoil* grids